BATTERY RECONNECT SYSTEM FOR A TELECOMMUNICATIONS POWER SYSTEM

ABSTRACT OF THE DISCLOSURE

A telecommunications power system includes a power bus and a battery module with a plurality of batteries. A contactor connects the batteries to the power bus. A distribution module and a plurality of rectifier modules are connected to the power bus. A plurality of loads are connected by the distribution module to the power bus. A controller disconnects the batteries using the contactor when a voltage of the batteries falls below a low voltage disconnect threshold when AC power is lost and/or the rectifier modules fail. The controller minimizes current surge and high voltage transients when the rectifier modules begin providing power and the contactor closes to reconnect the batteries to the power bus. To minimize current surge and high voltage transients, the controller lowers a voltage of the rectifier modules to the voltage of the batteries before the contactor reconnects the batteries to the power bus. After reconnection, the controller gradually increases the voltage of the rectifier modules to the float voltage. The controller employs a serial communications protocol over a communications bus.